Claims

[c1] 1. A method of inter-frame Y/C separation, comprising:

sampling a composite video signal for temporarily storing a plurality of sampled data $F_mP_{x,y}$, wherein the $F_mP_{x,y}$ represents data of the y pixel at the x line of the m frame, and the m, x and y are integers larger than, or equal to, 0;

measuring a plurality of luma data $Y_{x,y}$ by a $F_{m+1}P_{x,y}$, the $F_mP_{x,y}$, a $F_{m-1}P_{x,y}$ and a $F_{m-2}P_{x,y}$, wherein $Y_{x,y}$ represents luma data of the y pixel of the x line; and

measuring a plurality of chroma data $C_{x,y}$ by the $F_{m+1}P_{x,y}$, the $F_mP_{x,y}$, the $F_{m-1}P_{x,y}$ and the $F_{m-2}P_{x,y}$, wherein $C_{x,y}$ represents luma data of the y pixel of the x line.

[c2] 2. The method of inter-frame Y/C separation of claim 1, wherein a formula for measuring the luma data is:

$$Y_{x,y}=(F_{m+1}P_{x,y}+F_mP_{x,y}+F_{m-1}P_{x,y}+F_{m-2}P_{x,y})/4.$$

[c3] 3. The method of inter-frame Y/C separation of claim 2, wherein the luma data $Y_{x,y}$ are the luma data of the m frame.

[c4] 4. The method of inter-frame Y/C separation of claim 1, wherein when the composite video signal is a signal of

NTSC, the step of sampling the composite video signal is performed by 4 folds of frequency of a sub-carrier signal, and the phase of the sub-carrier signal is 0, 0.5π, π, or 1.5π.

[c5] 5. The method of inter-frame Y/C separation of claim 4, wherein a formula for measuring the chroma data is:

$$C_{x,y} = \pm(F_m P_{x,y} + F_{m-2} P_{x,y} - F_{m+1} P_{x,y} - F_{m-1} P_{x,y})/4.$$

[c6] 6. The method of inter-frame Y/C separation of claim 5, wherein the chroma data $C_{x,y}$ are the chroma dataof the m frame.

[c7] 7. The method of inter-frame Y/C separation of claim 1, wherein the step of sampling the composite video signal is performed by 4 folds of frequency of a sub-carrier signal, and the phase of the sub-carrier signal is 0.25π, 0.75π, 1.25π, or 1.75π.

[c8] 8. The method of inter-frame Y/C separation of claim 7, wherein the chroma data are measured in accordance with a formula:

$$C_{x,y} = \pm(F_{m+1} P_{x,y} + F_m P_{x,y} - F_{m-1} P_{x,y} - F_{m-2} P_{x,y})/4; \text{ or}$$
$$C_{x,y} = \pm(F_m P_{x,y} + F_{m-1} P_{x,y} - F_{m+1} P_{x,y} - F_{m-2} P_{x,y})/4.$$

[c9] 9. The method of inter-frame Y/C separation of claim 8, wherein the chroma data $C_{x,y}$ are the chroma data of the m frame.

[c10] 10. The method of inter-frame Y/C separation of claim 7, wherein when the composite video signal is a signal of PAL system, the step of sampling is performed at the phase of the sub-carrier signal is 0.25π, 0.75π, 1.25π, or 1.75π.